

## Course Learning Outcomes for Unit II

Upon completion of this unit, students should be able to:

4. Identify political factors that influence and determine financial management practice in the public arena.
  - 4.1 Explain public goods and their characteristics.
  - 4.2 Summarize Arrow's impossibility theorem and how it can be used in the political process.

## Reading Assignment

**Chapter 4:**  
Public Goods

**Chapter 5:**  
Public Choice and the Political Process

## Unit Lesson

Government operations function similar to a business when it comes to the production of a good. However, distribution and consumption of government produced goods is different from those distributed and consumed by the private sector in that the goods in the private sector are not rationed. Examples of public goods include public health, public recreation, public education, roads and bridges, and public safety. As indicated previously, private goods are supplied through markets (Hyman, 2014). In contrast, government supplies public goods through various political institutions. Government agencies or organizations (political institutions) produce legislation, reduce conflicts, and provide basic services to citizens.

Public goods assume a two-dimensional characteristic: non-excludable and non-rival (Asllani, White, & Etkin, 2012). A non-excludable good is a good that can be enjoyed by anyone, even those who refuse to pay for it (Hyman, 2014). A non-rival good is one that can be enjoyed by more than one individual without decreasing the amount for others (Hyman, 2014). For example, a large number of consumers or beach-goers can enjoy the beach without keeping others from also enjoying the beach. In addition, the amount of time one individual occupies the beach does not prevent the other from enjoying the same length of time or even longer.

Let's consider beach access. Most beaches are considered public spaces or common areas. However, maintaining the beach is a part of government's role. Beach erosion happens as a result of natural disasters. The landscapes along some coastal areas in the United States are dramatically impacted by hurricanes (Carpenter, 2013).



Daytona Beach, Florida  
(Mrmiscellaneous~commons/wiki, 2005)

Reflecting on the results of natural disasters allows us to focus on public services or goods provided by the political institution known as the Federal Emergency Management Agency (FEMA). This agency establishes the process through which assistance to society is delivered in the event of a natural disaster. For example, communities affected by Hurricanes Camille, Andrew, or Katrina experienced uprooted trees as well as property on roadways. These communities needed financial assistance to clean up and restore their areas. Therefore, one impact of these disasters requires removing materials and debris from streets and public areas of affected communities as the debris and materials can cause safety hazards (Cairnie, Coor, & DeVinney, 2015).

Consider the Federal Communications Commission (FCC), which is a political institution that regulates the emergency 911

system. This service has been the traditional medium for accessing public safety resources such as fire, police, medical assistance, and ambulance service via telephone. Prior to the establishment of 911, citizens who were in need of lifesaving assistance from community agencies had to access a different seven-digit phone number for each respective service. However, the government established a public safety answering point (PSAP) with a single, central number, nationwide. This created 911 as the universal number that people utilize in which a dispatcher assigns the appropriate first responder to the emergency (Wilshusen, 2014).

Let's continue our focus on the emergency 911 system and factor in the widespread communication tool of *texting*, a non-voice medium. Until recently, the 911 system was not equipped to receive non-voice notifications. This prompted federal and state authorities to create the Next Generation Emergency 911 (NG911) (Holloway & Seeman, 2012). Today's digital society expects government to provide this capability to speech-disabled citizens as well as all other citizens.

In 2014 an undisclosed man from Texas was documented as the fourth person in the United States to die from a brain disorder believed to be caused by consumption of beef products contaminated with mad cow disease (Associated Press, 2014). Political institutions such as the Centers for Disease Control and Prevention (CDC) and the Federal Drug Agency (FDA), often referred to as America's public health agencies, monitor public health dangers such as mad cow disease. This disease threatens the hamburger industry, which is very popular throughout the United States. Have you ever considered who monitors outbreaks such as Ebola? This disease created a paralyzing fear domestically and internationally and is monitored by the CDC.

Other public safety institutions include the National Institutes of Health (NIH), which collaborated with researchers on the analysis of the first cured HIV-infected child in Mississippi (NIH, 2013). The NIH's mission is to seek fundamental knowledge about the nature and behavior of living systems and to apply that knowledge to enhance health, reduce illness and disability, and lengthen life. In 2014, NIH confirmed that levels of HIV of the Mississippi infant were now traceable (NIH, 2014).

Let's shift our focus to the Department of Economic and Community Development, which implements strategies to help businesses grow and succeed. Community sidewalks are distinct public spaces (Ehrenfeucht & Loukaitou-sideris, 2010). Sidewalks provide a means of safe transportation for neighborhoods and improve public safety. Other political institutions such as the Federal Highway Administration monitor bridges. Many of you may recall the collapse of an interstate highway bridge in Minnesota in 2007. In the United States, the Federal Highway Administration estimates around 153,000 of the 590,000 bridges are structurally deficient or functionally obsolete (U.S. infrastructure, 2007).

Hyman (2014) discusses a possible utopian society where efficiency can be achieved in smaller groups through a cooperative method referred to as the Lindahl equilibrium. This method suggests members would voluntarily pool their resources equally to enjoy luxury or desired goods. However, according to Hyman (2014), goods with benefits that cannot be withheld from those who do not pay and are shared by large groups of consumers give rise to an externality known as the free-rider problem. This occurs when a person benefits from a good without contributing to the cost or paying for it. In this case, market failure happens because of the externality.

Therefore, public goods corresponding to safety require a collective effort from federal, state, and local government organizations. Providing this good requires financing through taxes and demonstrates the role of government's attempt to create market efficiency as indicated in the previous unit. Creating market efficiency depends upon government's view of social optimality. Government assesses the public's demand and evaluates the quantity needed as well as the cost to supply it.

Chapter 5 emphasizes public choice and how political institutions are formed. Hyman (2014) tells us that public choice is made during the election process. Hyman (2014) suggests that citizens' choices are influenced by the desired public good. Hence, regardless of the ideology, society selects the candidate that is most likely to supply the benefit or good to the satisfaction of citizens. Therefore, Arrow's impossibility theorem suggests that voters often utilize a ranking system when casting their vote (Hyman, 2014). Furthermore, Arrow suggests that in a race with three candidates or more, determining a true winner will be impossible (Hyman, 2014). However, for various reasons, including the process of gathering information (externalities), costs, and evaluating the pros and cons, many citizens choose not to vote. Assumptions for fairness included in Arrow's theorem are the following:

- Voters have free choice.
- Political equilibrium has been attained.
- Changes in preference must not move in the opposite direction.
- Alternatives must not be coerced.
- Eliminating or adding alternatives must not impact choice.
- Choice must be transitive (Hyman, 2014).



Voting booth in Buffalo, New York  
(Asdefgaheckel, 2008)

For example, the 2016 primary Presidential race began with many potential candidates of the Republican or Democratic persuasion. Let's apply Arrow's theorem to this election. First, for the Republican ticket, we will examine the top five likely candidates, including Senator Ted Cruz of Texas, Senator Rand Paul of Kentucky, Senator Marco Rubio of Florida, Governor Chris Christie of New Jersey, and former Governor Jeb Bush of Florida.

If we apply Arrow's theorem to the respective list of Republican candidates, we find that the first assumption above is met. Voters have free choice. However, the second assumption, which is political equilibrium, is not met. Each state in the U.S. has a different voting process. Therefore, according to the theorem, it will be impossible to unequivocally determine the true Republican nominee. Applying the same analysis to candidates of the Democratic ticket will yield the same result. The theorem indicates all of the assumptions must be met.

The political institutions are assigned to deliver public goods and services to society. Political institutions can include various agencies, organizations, and/or individuals. These agencies can implement or enforce laws and standards on consumable products, public

safety, and environmental hazards. Political institutions are generally operated by elected officials who are selected by members of society.

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